REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action.

The Examiner failed to indicate on the Office action summary sheet (PTOL-326) that ALL certified copies of the priority documents have been received. This application claims priority to JP 2004-114713 (filed April 8, 2004), as stated on the Application Data Sheet of October 3, 2006. A certified copy of the priority document has been received by the USPTO, as stated on the 371 Acceptance Letter (PCT/DO/EO/903) mailed May 1, 2007. Accordingly, applicants respectfully request that the next Office action include an acknowledgment of the priority claim and an indication that all priority documents have been received.

Applicants note that the Examiner did not indicate a consideration of references 2 (JP 2000-23974) and 4 (JP 2002-78710) on applicants' IDS of January 4, 2007. Both of these references were cited on the International Search Report provided to the USPTO. Applicants thank the Examiner for indicating a consideration of reference 4 on the Notice of References Cited (PTO-892) included with the outstanding Office action. Enclosed is a copy of reference 2 for the Examiner's consideration. Applicants respectfully request that the Examiner consider reference 2 and provide an indication of such consideration with the next Office action.

The Examiner objected to claims 1-4 and 6 for informalities, which have been corrected by the present amendment.

Claims 3 and 6 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The term "smoothing" has been replaced by "interpolating" in claims 3 and 6. Applicants respectfully submit that claims 3 and 6 are discernible and, accordingly, request withdrawal of the rejections under 35 U.S.C. 112.

Claims 1, 2, 4 and 5 were rejected under 35 U.S.C. 102(b) as being anticipated by Mochizuki. Amended claim 1 requires data streams comprising image data arrays and corresponding oscillation angle information. The oscillation angle information is generated by an oscillation angle detection means. An example of a data stream comprising image data arrays and corresponding oscillation angle information can be seen in Fig. 6.

Mochizuki does not teach a data stream having both image data arrays and oscillation angle information. Mochizuki teaches a three-dimensional memory 108 for storing echo data (concerning a three-dimensional area) in such a manner that the three-dimensional position of the echo data corresponds to each address in the memory (7:25-32). Writing of the echo data into the memory is controlled in response to an angle signal from an angle detector. However, merely controlling the writing of echo data into a memory in response to an angle signal does not teach a data stream comprising both image data arrays and corresponding oscillation angle information. Mochizuki does not teach to include angle information from its angle detector in its three-dimensional memory 108.

In view of the deficiencies of Mochizuki, applicants respectfully submit that claim 1 is not anticipated by and is allowable over Mochizuki.

Amended claim 2 requires an oscillation angle information adding means that inserts oscillation angle information between image data arrays. Mochizuki does not teach to insert oscillation angle information between image data arrays. In view of the deficiencies of Mochizuki, applicants respectfully submit that claim 2 is not anticipated by and is allowable over Mochizuki.

Amended claim 4 requires a delay means for delaying position information in the oscillation direction of the ultrasonic transducer unit by a processing time of a scanning

conversion means. The scanning conversion means outputs two-dimensional image data. The delay means outputs the delayed position information to a three-dimensional image processing means, thereby synchronizing a timing of the outputted two-dimensional image data with the delayed position information. Mochizuki teaches a controller 102 that receives a signal from an angle detector 44. However, Mochizuki does not teach the concept of delaying position information and synchronizing a timing of outputted two-dimensional image data with delayed position information. For at least this reason, claim 4 is not anticipated by Mochizuki.

Claim 5 recites, "recording a receiving signal obtained by the two-dimensional scanning by the ultrasonic transducer unit in a frame memory to create two-dimensional image data, writing position information in the oscillation direction of the ultrasonic transducer unit in the frame memory." In claim 5, the receiving signal obtained by two-dimensional scanning *and* position information are respectively recorded and written *in the same frame memory*.

In Fig. 8 of Mochizuki, it can be seen that the output of the angle detector 44 is provided to the controller 102, while the output of the receiver 106 (i.e., echo data) is provided to the three-dimensional memory 108. These noted outputs are not provided to the same memory. The writing of echo data in the three-dimensional memory 108 is controlled by the controller 102 in response to the angle signal from the angle detector 44, and the three-dimensional position of the echo data corresponds to each address in the memory 108 (7:25-32). However, there is no teaching in Mochizuki that the output of the angle detector 44, or any other position information, is written into memory 108. Indeed, such information would be unnecessary because the three-dimensional position of the echo data corresponds to each address in the memory 108. Therefore, Mochizuki fails to teach a frame memory in which a receiving signal obtained by

two-dimensional scanning is recorded and also in which position information is written. For at least this reason, claim 5 is not anticipated by Mochizuki.

Claims 3 and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki in view of Raitzer. Claims 3 and 6 depend from claims 1 and 2, respectively. Applicants respectfully submit that the above-discussed deficiencies of Mochizuki are not corrected by Raitzer, and that claims 3 and 6 are allowable over the combination of Mochizuki and Raitzer.

New claims 7 and 8 have been added. Claims 7 and 8 depend from claims 1 and 2, respectively.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No.: NIHE-41412.

Respectfully submitted,
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